

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 15-18 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE10014468 to Kehrmann, in view of U. S. Patent No. 4784691 to Rasmussen

Regarding claims 15-16 and 25, Kehrmann discloses a composition comprising $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ and limestone, which is an mineral acid modifier as applicant set forth in claim 25 (Page 3, lines 1-14). But he is silent about the using of $\text{FeSO}_4 \cdot \text{H}_2\text{O}$ as applicant set forth in the instant application.

However, it would have been obvious to one of ordinary skill in the art at the time of invention by applicant to use $\text{FeSO}_4 \cdot \text{H}_2\text{O}$ in the cement composition, motivated by the fact that Rasmussen, also drawn to cement composition, disclose that $\text{FeSO}_4 \cdot n\text{H}_2\text{O}$ (n is in the range of 1-7, which is evidenced by the applicant submitted D4 translation), is

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used to reduce the content of the chromate in the cement composition and to obtain healthy working environment (col. 1, lines 41-47).

Regarding claim 17, kehrmann discloses that the amount of the $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ is about 0.01-3% by weight of the cement and the limestone amount is in the range of 0.5-15% by weight of the $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$.

Regarding claim 18, Kehrman discloses that the amount of the $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ is about 0.01-3% by weight of the cement. Rasmussen discloses the chromate reducer amount is in the range of 0.01-1%, therefore the amount of the $\text{FeSO}_4 \cdot \text{H}_2\text{O}$ can be in the range of 0-0.99%. When the amount of the $\text{FeSO}_4 \cdot \text{H}_2\text{O}$ and $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ is both in the range of 0.5%, the ratio of $\text{FeSO}_4 \cdot \text{H}_2\text{O}$ to $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ is 1.

37 CFR 1.132

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The oath or declaration filed 01/13/2010 is defective because: the application number of the instant case is 10/596333 not 10/569333

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Response to Arguments

Applicant's arguments filed 06/24/2011 have been fully considered but they are not persuasive.

The applicant presents some data with special ratio of copperas salt and filter salt. The Examiner respectfully submits that there is no mass ratio limitation in the independent claims. The applicant argues that there is no

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unexpected result of using acid regulator. The Examiner respectfully submits that how applicant can present unexpected result over prior art U. S. Patent No. 4784691 to Rasmussen, which disclose the composition of $\text{FeSO}_4 \cdot n\text{H}_2\text{O}$ (n is in the range of 1-7, which is evidenced by the applicant submitted D4 translation)

The applicant fail to compare the instant application with DE10014468 to Kehrmann, which disclose the use of $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ and limestone. The applicant argues that the applicant present enough data (1:1, 3:1, 5:1) for the limitation of independent claims. The Examiner respectfully submit that the possibility of mass ratio of independent claim is unlimited. Evidence of unexpected results must be commensurate in scope with the subject matter claimed. *In re Linder* 173 USPQ 356. To establish unexpected results over a claimed range, applicants should compare a sufficient number of tests both inside and outside (i.e. as well as the upper and lower limits) the claimed range to show the criticality of the claimed range. ***In re Hill* 284 F.2d 955, 128 USPQ 197 (CCPA 1960).** Further more any differences between the claimed invention and the prior art may be expected to result in some differences in properties. The issue is whether the properties differ to such an extent that the difference is really unexpected. *In re Merk & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHUANGYI ABU ALI whose telephone number is (571)272-6453. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shuangyi Abu-Ali/
Primary Examiner, Art Unit 1731